

- 3 downstream of said binding sequence
- 1 2. The cell of claim 1, wherein the nuclear receptor is a vitamin D receptor.
- 1 3. A cell comprising a vector carrying a gene encoding a fusion polypeptide
- 2 comprising DNA binding domain of a nuclear receptor and ligand-binding domain of a
- 3 nuclear receptor, and a vector carrying the binding sequence of the DNA binding domain of
- 4 the nuclear receptor and a reporter gene located downstream of the binding sequence.
- 1 4. The cell of claim 3, wherein the DNA binding domain of the nuclear receptor 2 is originated from GAL4.
- 1 5. The cell of claim 3, wherein the ligand-binding domain of the nuclear receptor is originated from vitamin D receptor.
- 1 6. A method for screening a ligand that binds to a nuclear receptor, the method comprising
- 3 (A) contacting a test compound with the cell of claim 1,
- 4 (B) detecting the reporter activity, and
- 5 (C) selecting the test compound which elicited the reporter activity in the cell.

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(A)

1 7. A method for determining whether or not a test compound is a ligand that 2. binds to a nuclear receptor, the method comprising, (A) contacting a test compound with the cell of claim 1, and 3 (B) detecting the reporter activity. 8. A method for screening a gene encoding a polypeptide that converts a ligand precursor into a ligand, the method comprising (A) introducing a test gene into the cell of claim 1, 3 (B) contacting a ligand precursor to the cell into which the test gene is 4 introduced, 5 6 (C) detecting the reporter activity, and isolating the test gene from the cell which showed the reporter activity. (D) 7 9. A method for determining whether or not a test gene encoding a polypeptide 1 that converts a ligand precursor into a ligand, the method comprising 2 (A) introducing a test gene into the cell of claim 1, 3 contacting a ligand precursor to the cell into which the test gene is 4 (B) 5 introduced, and 6 (C) detecting the reporter activity. 10. A method for screening a gene encoding a polypeptide that converts an 1 inactive form of vitamin D₃ into an active form, the method comprising 2

introducing a test gene into the dell of claim 2,

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	4	(B)	contacting an inactive form of vitamin D ₃ to the cell into which the test gene
	5	is introduced,	
	6	(C)	detecting the reporter activity, and
	7	(D)	isolating the test gene from the cell that shows the reporter activity.
n \	1	11.	A method for determining whether or not a test gene encodes a polypeptide
July	2	that converts a	in inactive form of vitamin D ₃ into an active form, the method comprising
BI	, 3/	(A)	introducing a test gene into the cell of claim 2,
Conva	4	(B)	contacting an inactive form of vitamin D ₃ with the cell into which the test
C	5	gene is introdu	aced, and
GCTCCC	6	(C)	detecting the reporter activity.
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	1	12.	A ligand that binds to a nuclear receptor, which is obtainable by the method of
10:	1	12.	A ligand that binds to a nuclear receptor, which is obtainable by the method of
10:			A ligand that binds to a nuclear receptor, which is obtainable by the method of
			A ligand that binds to a nuclear receptor, which is obtainable by the method of A gene encoding a polypeptide that converts a ligand precursor into a ligand,
10:	2	<u>claim 6.</u> 13.	
10:	2	<u>claim 6.</u> 13.	A gene encoding a polypeptide that converts a ligand precursor into a ligand,
10:	2	<u>claim 6.</u> 13.	A gene encoding a polypeptide that converts a ligand precursor into a ligand,
10:	1 2	13. which is obtain	A gene encoding a polypeptide that converts a ligand precursor into a ligand, nable by the method of claim 8.
10:	2 1 2	13. which is obtain	A gene encoding a polypeptide that converts a ligand precursor into a ligand, nable by the method of claim 8. A gene encoding a polypeptide that converts an inactive form of vitamin D ₃

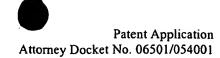
derivative comprising said sequence in which one or more amino acids are substituted,

- 3 deleted, or added, and having activity to convert an inactive form of vitamin D₃ into an active
- 4 form.
- 1 16. A polypeptide comprising the amino acid sequence of SEQ ID NO: 2 or its
- 2 derivative comprising said sequence in which one or more amino acids are substituted,
- deleted, or added, and having activity to convert an inactive form of vitamin D₃ into an active
- 4 form.
- 1 17. A polypeptide encoded by a DNA that hybridizes with a DNA having the
- 2 nucleotide sequence of SEQ ID NO: 3, wherein the polypeptide has activity to convert an
- 3 inactive form of vitamin D₃ into an active form.
- 1 18. A polypeptide encoded by a DNA that hybridizes with the nucleotide
- 2 sequence of SEQ ID NO: 4, wherein the polypeptide has activity to convert an inactive form
- of vitamin D_3 into an active form.
- 1 19. A DNA encoding the polypeptide of claim 15.
- 1 20. A DNA hybridizing with a DNA having the nucleotide sequence of SEQ ID
- 2 NO: 3 and encoding a polypeptide having activity to convert an inactive form of vitamin D₃
- 3 into an active form.

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- 1 21. A DNA hybridizing with a DNA having the nucleotide sequence of SEQ ID NO: 4 and encoding a polypeptide having activity to convert an inactive form of vitamin D₃
- 3 into an active form.
- 1 22. A vector comprising the DNA of claim 20.
- 1 23. A transformant expressively retaining the DNA of claim 20.
- 1 24. A method for producing polypeptide, the method comprising culturing the 2 transformant of claim 23.
- 1 25. An antibody that binds to the polypeptide of claim 15.
 - 26. A method for screening a gene encoding a polypeptide that converts an inactive form of transcriptional regulatory factor into an active form, the method comprising
- 3 (A) introducing a test gene into cells into which a vector comprising a gene
- 4 encoding an inactive form of transcriptional regulatory factor and a vector comprising the
- 5 binding sequence of said inactive transcriptional regulatory factor and a reporter gene located
- 6 downstream thereof are introduced,
- 7 (B) detecting the reporter activity, and
- 8 (C) isolating the test gene from the cells showing the reporter activity.



- 1 27. The method of claim 26, wherein the inactive transcriptional regulatory factor
- 2 is a complex of non-phosphorylated NFkB and IkB, non-phosphorylated HSTF, or non-
- 3 phosphorylated AP1.